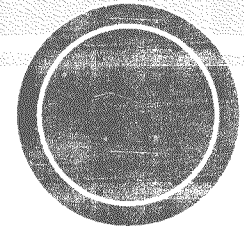


# **Rolling Knolls Landfill Superfund Site**

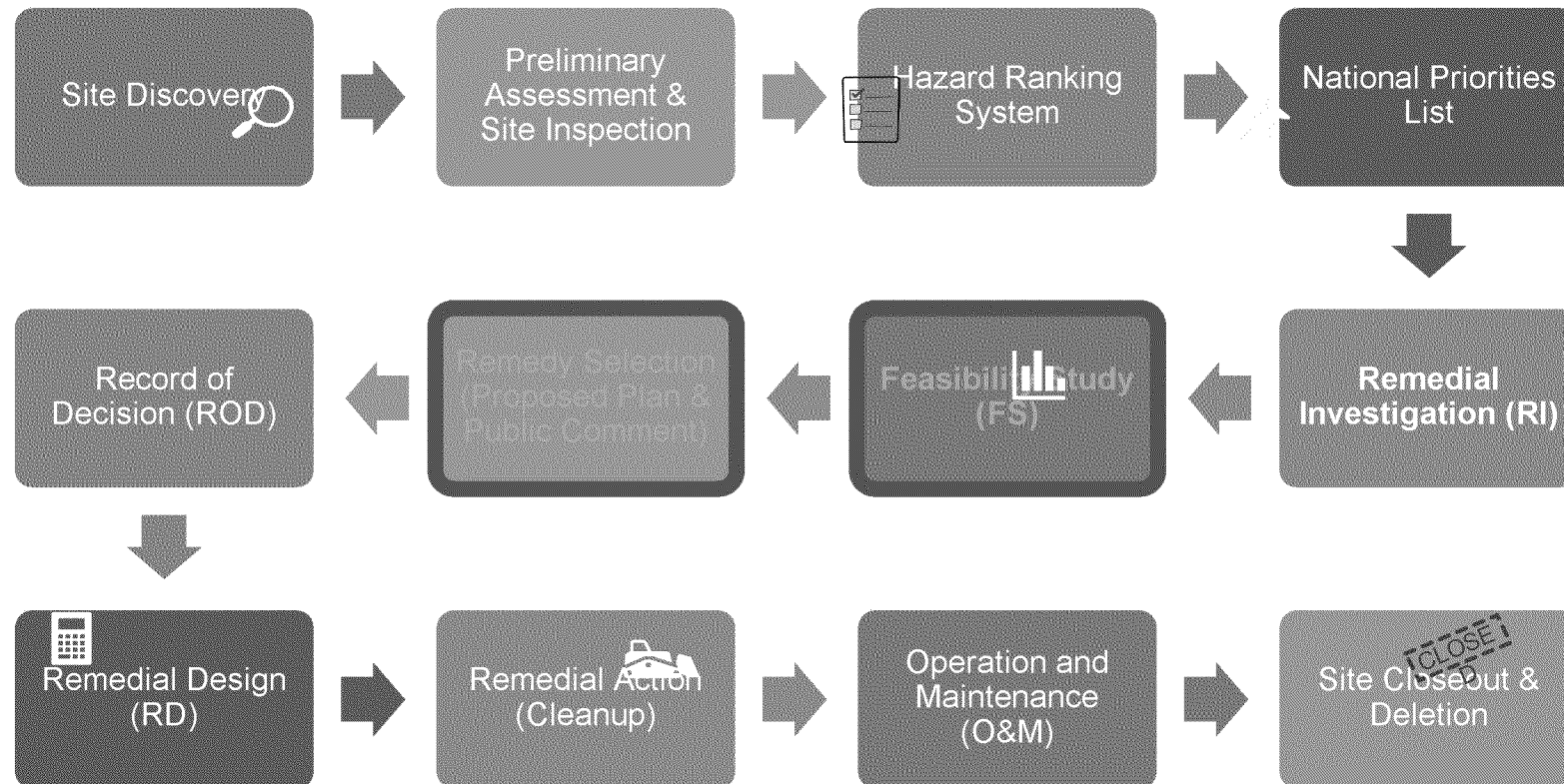
Overview of Feasibility Study Process

CAG Meeting

July 31, 2019



# Superfund Process



# Primary Goals of a Feasibility Study

- Review the Remedial Investigation Report and Risk Assessment(s) to summarize and refine:
  - The media and areas of a Site that pose an unacceptable risk and/or exceed appropriate standards
  - The Contaminants of Concern at a Site
- Determine Remedial Action Objectives and Preliminary Remediation Goals
- Develop remedial alternatives that will achieve the Remedial Action Objectives and achieve Preliminary Remediation Goals for a Site

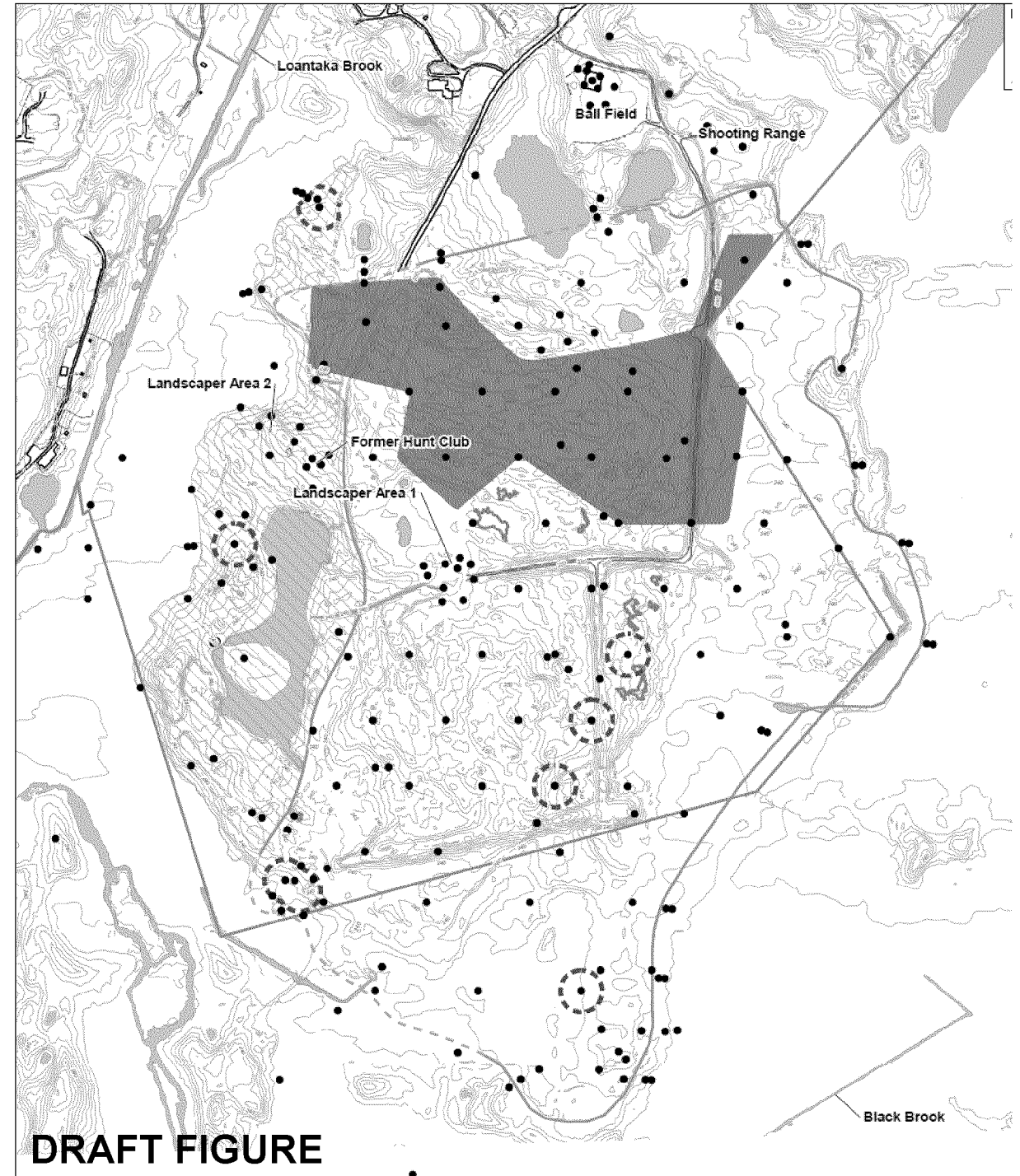
*NOTE: The above steps are typically conducted iteratively and throughout the process*

- Conduct a formal evaluation and comparison of remedial alternatives to form the basis for EPA to propose its preferred remedial alternative for a Site to the public, for review and comment



# Review of Remedial Investigation and Risk Assessment Results

- Reasonably anticipated future use of the Site is for passive recreation
- Unacceptable risks are generally contained within the landfill boundary
- Soil/sediment primary media of concern
- Groundwater impacts are generally co-located with soil contamination
- Risks associated with surface water below criteria
- Ecological risks posed by site elevated for vermivorous birds and mammals



# Contaminants of Concern

- Risk drivers for both human and ecological receptors are Polychlorinated biphenyls (PCBs) and metals. Additional contaminants are present at concentrations above relevant site-specific criteria.
- The Contaminants of Concern for soil at the Site are expected to be:

VOCs	SVOCs	PCBs	Inorganics
Chloroform	Acetophenone	Total PCBs	Antimony
	Bis(2-ethylhexyl) phthalate		Arsenic
	Benzo(a)pyrene		Lead
			Vanadium

- Site-specific Preliminary Remediation Goals are determined for each Contaminant of Concern



# Remedial Action Objectives

The draft Remedial Action Objectives for the Site are:

- Prevent or minimize current and potential future unacceptable risks to current and potential future human and ecological receptors through direct contact with or ingestion of contaminated soil.
- Control or remove source areas to prevent or minimize impacts to groundwater.

Any viable remedial alternative must work towards achieving these goals.



# Development of Remedial Alternatives Process

- Steps 1 and 2: Identification and Screening of Technology Types and Process Options
  - Goal is to “develop an appropriate range of waste management options that will be analyzed more fully in the detailed phase of the Feasibility Study.”
  - Looks at potential ways of meeting the Remedial Action Objectives and achieving Preliminary Remediation Goals
  - Start off looking at wide range of potential options, and then screen out those that do not make sense for the Site
  - Assemble complete remedial alternatives to carry through to Step 3
- Step 3: Detailed Analysis of Remedial Alternatives
  - Describe fully the alternatives
  - Evaluate each individually through the first seven of the “Nine Criteria”
  - Compare alternatives to each other through the first seven of the Nine Criteria



# Screening of Alternatives

- The Potentially Responsible Parties initially evaluated possible 29 process options, 17 of which were not retained:
- Options not retained included enhanced bioremediation; placement of an impermeable cap; in-situ treatments such as oxidation/reduction, thermal treatment or solidification; and ex-situ treatments such as thermal, chemical and solidification/stabilization.
- The retained options, which would be combined as appropriate, included:
  - Monitoring, institutional controls and engineering controls
  - Containment via vegetative cover, low permeability cover, or subsurface low-permeability liner
  - In-situ treatment via phytoremediation
  - Removal via excavation
  - Disposal off-site or via on-site consolidation





# Development of Remedial Alternatives

- The retained process options are evaluated further and consideration is given as to how they can be combined to meet the Remedial Action Objectives for the Site for the reasonably anticipated future use or uses.
- Based on this more detailed evaluation, the general options for addressing Site soil include, at this time:
  - No action – this must be considered as per Superfund law
  - Site Controls -- Institutional and Engineering Controls
  - Excavation and/or capping of portions of the site to prevent direct contact with or ingestion of soil exceeding preliminary remediation goals; off-site disposal of excavated material
  - Excavation and capping of portions of the site to prevent direct with or ingestion of soil exceeding preliminary remediation goals; on-site containment of excavated material
  - Capping of all landfill material
- All excavated areas would need to be backfilled with clean fill
- Each alternative (other than no action) would include site controls and long-term monitoring



# The Nine Evaluation Criteria

## Threshold Criteria

- Overall Protection of Human Health and the Environment
- Compliance with Applicable or Relevant and Appropriate Standards

## Balancing Criteria

- Long-Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility and Volume through Treatment
- Short-Term Effectiveness
- Implementability
- Cost

## Modifying Criteria

- Community Acceptance
- State Acceptance



# Current Status/Next Steps

- EPA is awaiting comments from the New Jersey Department of Environmental Protection on a revised draft of the Feasibility Study report.
- EPA will prepare final comments to the draft FS that it will provide to the Potential Responsible Party group for incorporation into the final draft FS Report
- A Draft Final version of the FS Report will be released for public review.
- EPA will also release a Proposed Plan which describes and provides the rationale for EPA's preferred remedial alternative for the Site (likely just soil at this time).
- Release of the Proposed Plan starts a formal 30-day public comment period, during which a public meeting will be held and all comments received are recorded and reviewed. Anyone may request an extension of the comment period.
- After the public comment period ends, and in consideration of all comments received, EPA will select a remedy for the site soil in a Record of Decision.
  - EPA may re-evaluate its preferred alternative in light of information received.

